



Having thus fully set forth the nature and merits of my invention,

What I claim as new is—

In a stove-drum or other equivalent parts of heating apparatus, the means employed, or their equivalent, for securing a permanent gas-tight joint between the ends of the cylindrical portions thereof and the end plates or other contiguous portions of said apparatus, consisting of the rings O and C, attached to or upon the ends of said cylinders A and B, respectively, and from thence projecting horizontally outward or inward and thence upward, so as to form a rebate D, for the reception of the cover E, in combination with said cover, and with suitable bolts G passing through said parts, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of February, 1871.

MICHAEL G. FAGAN.

Witnesses:

W. P. ALLESDORFER,  
AUG. P. COCHRAN.

and the top and bottom plates, so as to cause the heated escaping products of combustion to pass through the same and into an exit-pipe passing outward through the side or from the top of said drum, and thereby imparting a portion of their heat to the air surrounding the latter.

This device is, however, only shown for the purpose of illustrating my invention, which, as will be readily seen, is equally applicable to any portions of heating apparatus where it is desired to form a permanent joint between the end of a sheet-metal section or cylinder and a cast-metal cover.

The especial advantages possessed by this construction of a drum are—

First, the joint at either end is rendered entirely independent of and cannot be affected by the expansion or contraction of other parts of the device, and being made with very short bolts, is not liable to derangement from or by changes of temperature.

Second, each joint is horizontal, and no change of temperature or ordinary use of the heating apparatus can in any manner loosen or remove the cement, so that, if well made originally, said joints are certain to continue gas-tight while the metal remains intact.



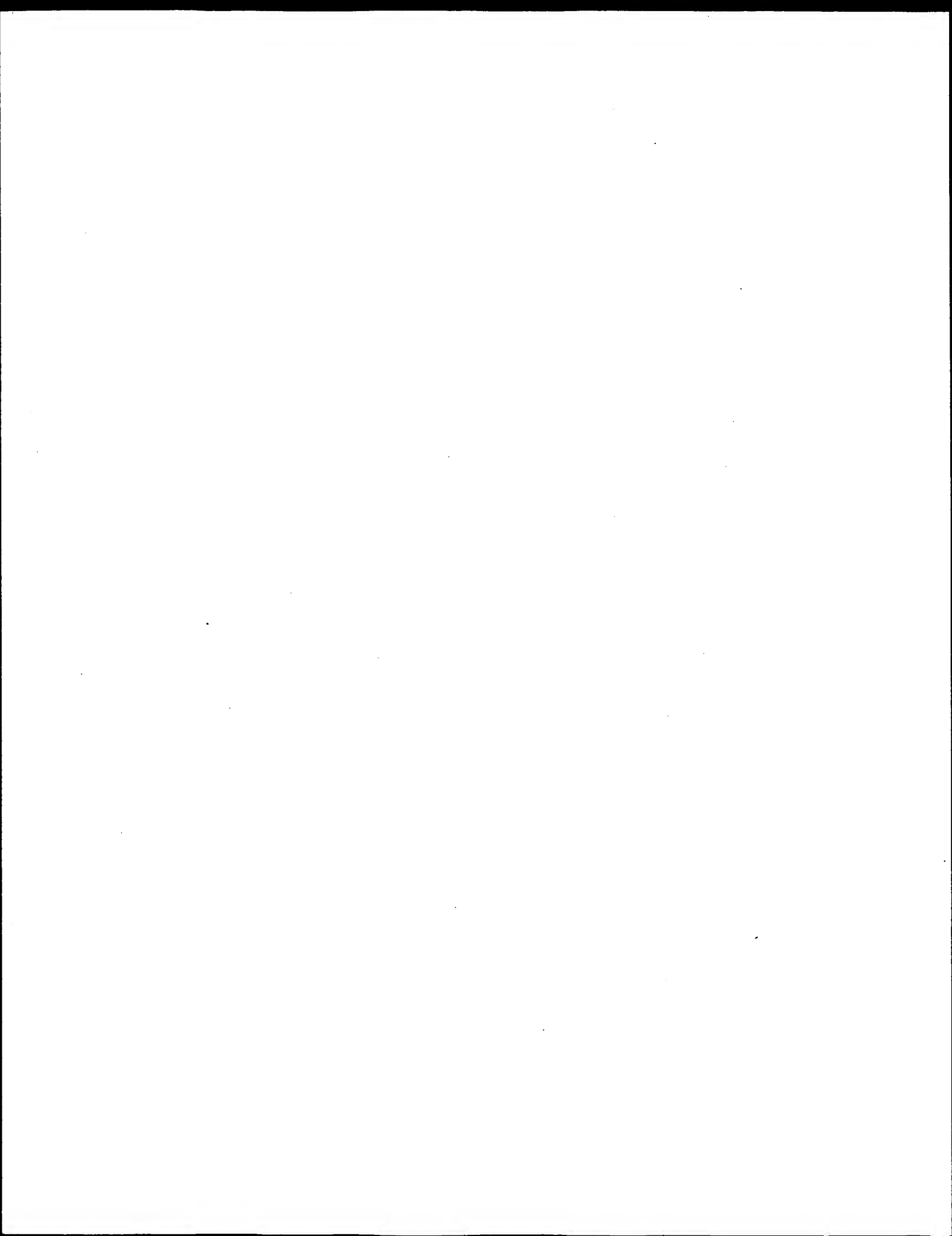


☒ L1: (107) pyroxylin  
☒ L2: (8) pyroxylin and resi  
☒ L3: (400) (pyroxylin nitro  
☐ Failed  
☒ Saved  
☐ Favorites  
☒ Tagged (13)  
☐ UDC

USPAT
  
Default operator: DR
  
☐ Plurals  
☒ Highlight all hit terms initially

	U	I	Document ID	Issue Date	Pages	Title	Current OR	Current XRef
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4049457 A	19770920	9	Photosensitive composition of polynitrate ester,	430/270.1	430/294; 430/350;
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4110114 A	19780829	10	Image forming method	430/323	204/192.26; 204/192.32;
5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4199649 A	19800422	10	Amorphous monomolecular surface coatings	430/5	148/33; 148/33.3;
6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4255481 A	19810310	5	Mask for selectively transmitting therethrough a	428/209	427/304; 428/332;
7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4282314 A	19810804	5	Mask for selectively transmitting therethrough a	430/413	156/268; 156/322;
8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4312934 A	19820126	9	Photosensitive compositions	430/294	430/270.1; 430/300;
9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4334008 A	19820608	10	Photosensitive compositions of polymer polynitrate ester	430/270.1	204/157.68; 430/269;
10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4356255 A	19821026	4	Photosensitive members and a process for forming patterns	430/325	430/165; 430/190;
11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4878973 A	19891107	7	Process for producing a thin resin film	156/85	156/108; 156/86;
12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4965316 A	19901023	11	Radiation sensitive polymers and use thereof	525/100	525/102; 525/326.1;
13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5061604 A	19911029	8	Negative crystalline photoresists for UV	430/296	430/313; 430/323;

11:23 AM



☒ Pending  
☒ Active  

☒ L1: (5) ("4181538") or ("4680616") or ("34645  
☒ L2: (4) ("4680616") or ("3464534") or ("49805  
☒ L3: (8) ("4987286") or ("5151135") or ("52834  
☐ Failed  
☒ Saved  
☒ (4250) acceleration adj sensor

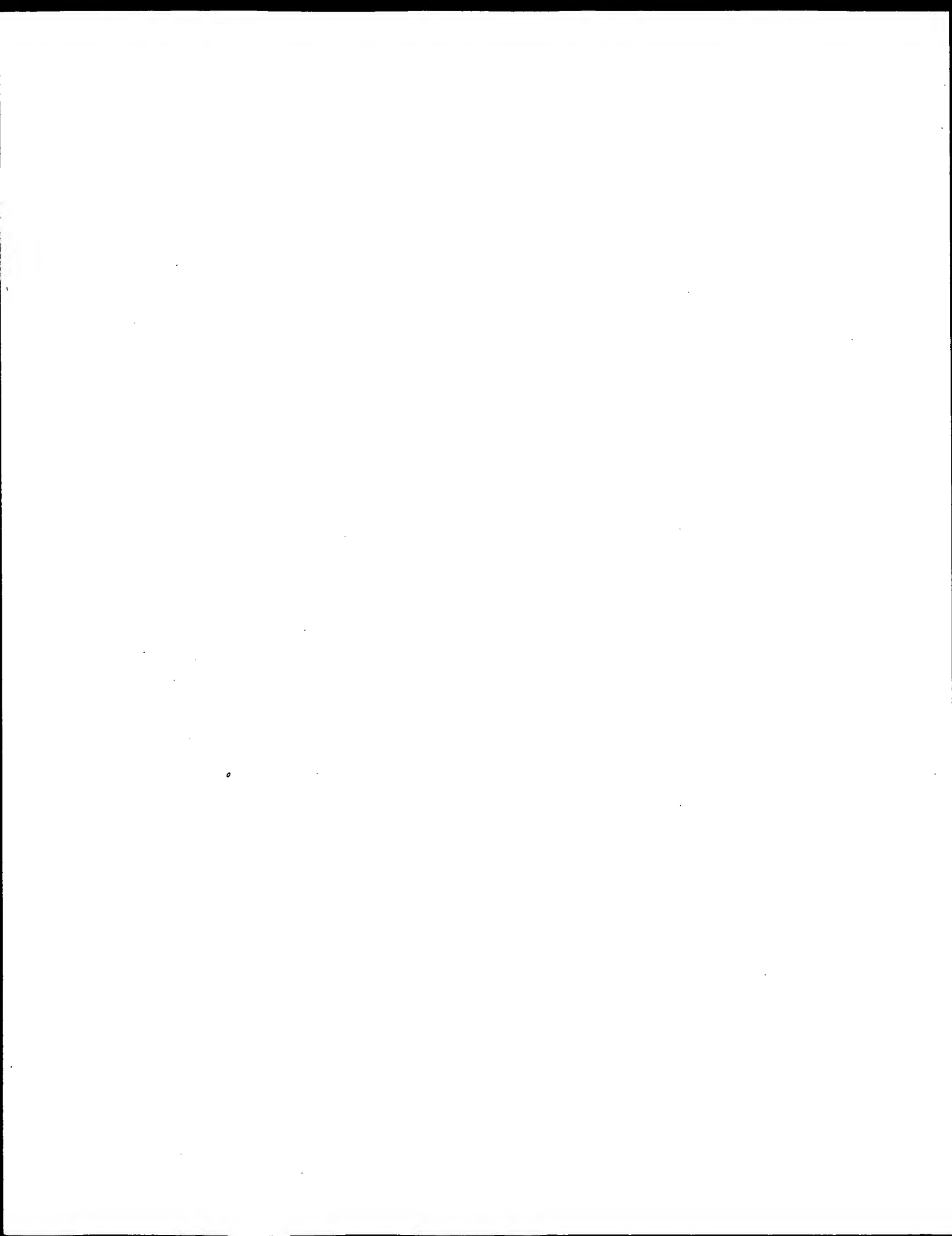
DB: USPAT

☒ Highlight all terms in body

5332879  
4292093  
5637245

	U	I	Document ID	Issue Date	Pages	Title	Current OB	Current XRef R
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5637245 A	19970610	6	Method and apparatus for minimizing degradation of	219/121.85	219/121.69 ; 219/121.84
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5393957 A	19950228		Laser microprocessing and the device therefor	219/121.85	219/121.76
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5332879 A	19940726		Method for removing trace metal contaminants from	219/121.69	219/121.86
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5283417 A	19940201		Laser microprocessing and the device therefor	219/121.85	219/121.76 ; 356/318
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5151135 A	19920929		Method for cleaning surfaces using UV lasers	134/1	117/97 ; 148/DIG.17
6	<input type="checkbox"/>	<input type="checkbox"/>	US 4987286 A	19910122		Method and apparatus for removing minute particles	219/121.68	219/121.6 ; 219/121.84
7	<input type="checkbox"/>	<input type="checkbox"/>	US 4980536 A	19901225		Removal of particles from solid-state surfaces by	219/121.68	219/121.82 ; 219/121.86
8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 4292093 A	19810929		Method using laser irradiation for the	134/1.3	117/904 ; 136/261

10:10 AM



EAST - [default1.wsp:1]

File View Edit Tools Window Help

Active  
Failed  
Saved

- (2803) sti
- (1) ("5923987").PN.
- (57320) clean\$6 and laser
- (27045) (clean\$6 and laser
- (2895) ((clean\$6 and laser

DBs: USPAT

Default operator: OR

☐ Plural  
☒ Highlight all hit terms initially

BRS I. IS&R Image Text HTML

	Type	Hits	Search Text	DBs	Time Stamp	Comment
1	BRS	2803	sti	USPAT	2002/05/01 15:2	
2	IS&R	1	("5923987").PN.	USPAT	2002/11/07 12:1	
3	BRS	57320	clean\$6 and laser	USPAT; US-PGPUB; EP	2003/06/06 11:4	
4	BRS	27045	(clean\$6 and laser) and substrate	USPAT; US-PGPUB; EP	2003/06/06 11:4	
5	BRS	2895	((clean\$6 and laser) and substrate)	USPAT; US-PGPUB; EP	2003/06/06 11:4	
6	BRS	5	((clean\$6 and laser) and substrate)	USPAT; US-PGPUB; EP	2003/06/06 11:5	
7	BRS	293	laser adj clean\$6	USPAT; US-PGPUB; EP	2003/06/06 11:5	
8	BRS	0	(laser adj clean\$6) and collodion	USPAT; US-PGPUB; EP	2003/06/06 11:5	
9	BRS	40	(laser adj clean\$6) and resist	USPAT; US-PGPUB; EP	2003/06/06 11:5	

5 Star Speaking Cl. Inbox - Micro. Regular Am. Microsoft Bo. EAST - Id. 2:07 PM

